Results of Testing

Chemical Name	CAS No.	Study Code/Type	Protocol/Guideline	Species	Exposure	Dose/Concentration	No. per Group	Results	Reference
Isopropanol	67-63-0	HEADME Pharmacokinetics	40 CFR 795.231	rats	iv bolus injection, 168 hr.	307 mg/kg	Not specified	86% of dose exhaled, with 55% being volatile organics and the balance CO_2. Less than 5% was excreted in the urine and approximately 1.5% in the feces. The carcass retained less than 4.0% of the dose. Peak blood levels of radiolabel averaged 364 and 329 µg-eq/g for males and females, respectively.	56 FR 12202; 3/22/91 OTS0532880 Docket OPPTS-44566
Isopropanol	67-63-0	HEADME Pharmacokinetics	40 CFR 795.231	rats	gavage, single dose (sacrificed at 72 hr) and multiple dose (sacrificed ensuing 96 hr)	300 mg/kg (non-toxic); 3000 mg/kg (toxic); 300 mg/kg/d for 8 days (nominal)	Not specified	Exhalation was major route of elimination with 56% and 26% exhaled as radiolabeled organic volatile and CO_2, respectively, at the low dose and 70% and 16% at the high dose. In the repeat dose study, 56% of the radiolabel was exhaled of which slightly less than 30% was as CO_2. Urine and feces were minor routes of excretion accounting for <8% and <1%, respectively for the three dosing regimes; carcass retention was <4% of the dose. Peak blood levels for males (females) were 343 (321) µg-eq/g, 2214 (2280) µg-eq/g, and 272 (258) µg-eq/g, respectively, for the three regimes.	56 FR 12202; 3/22/91 OTS0532880 Docket OPPTS-44566
Isopropanol	67-63-0	HEADME Pharmacokinetics	40 CFR 795.231	rats	inhalation (nose only) for 6 hr, 72-hr study	476, 4960 ppm	Not specified	Exhalation was major route of elimination with 83% and 89% of the dose exhaled at low and high dose levels. In the low dose study, 53% (46%) of the exhaled radiolabel as CO_2, in male (female) rats; 23% of the exhaled dose was CO_2 in the high dose study. Urine and feces were minor routes of excretion accounting for <8% and <2% pf the dose, respectively; carcass retention was <5% of the dose. Peak blood levels for males (females) were 116 (125) µg-eq/g, 1258 (1449) µg-eq/g, respectively, for the two regimes. Principle radiolabled components in the urine and breath were isopropanol and acetone. Using pooled data from all the pharmacokinetic studies, the half-life for the disappearance of isopropanol from blood was 1-2 hr except for the high-dose oral study which was 4-7 hr.	56 FR 12202; 3/22/91 OTS0532880 Docket OPPTS-44566

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Isopropanol	67-63-0	HEADME Pharmacokinetics	40 CFR 795.231	mice	iv bolus injection, 96 hours	304.5 mg/kg (male); 313.1 mg/kg (female)	Not specified	76% of dose exhaled, with 45% being volatile organics and the balance CO_2. Less than 4% was excreted in the urine and approximately 1.5% in the feces. The carcass retained less than 4.0% of the dose. Peak blood levels of radiolabel averaged 283 and 310 µg-eq/g for males and females, respectively. One radiolabeled metabolite was found in the urine and two in the breath. Radiolabeled metabolites from the breath traps contained isopropanol and acetone or acetone alone.	56 FR 12202; 3/22/91 OTS0532880 Docket OPPTS-44566
Isopropanol	67-63-0	HEADME Pharmacokinetics	40 CFR 795.231	mice	whole-body inhalation for 6 hr. 96-hr study	500, 5000 ppm (nominal)	Not specified	Exhalation was major route of elimination with 86% of the dose exhaled at the low dose and 92-94% at the high dose. In the low dose study, radiolabeled organic volatiles accounted for 50% of the dose with the balance as CO_2. In contrast, exhalation of volatile organics accounted for more than three times as much of the absorbed dose than did radiolabeled CO_2 at high dose levels (73% of the absorbed dose). Urine and feces were minor routes of excretion accounting for <7.8% and <2% pf the dose, respectively; carcass retention was about <6.5% of the dose. Peak blood levels for males (females) were 212 (236) µg-eq/g, 2944 (2954) µg-eq/g, respectively, for the two regimes. Three radiolabeled metabolites were found in the urine and two in the breath. Radiolabeled metabolites from the breath traps contained isopropanol and acetone or acetone alone. The half-life for the disappearance of isopropanol from blood generally increased with increasing dose.	56 FR 12202; 3/22/91 OTS0532880 Docket OPPTS-44566

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Isopropanol	67-63-0	HECTOXCARC Oncogenicity	40 CFR 798.3300	rats	inhalation, 6 hr/d, 5 d/wk, 104 weeks	500, 2500, 5000 ppm	10/sex	Exposure to isopropanol vapor for 24 months produced clinical signs of toxicity such as hypoactivity, lack of startle reflex, or narcosis at exposure levels of 2500 and 5000 ppm. Urine chemistry changes indicative of kidney damage were noted for males at 2500 ppm and both males and females at 5000 ppm. A number of nonneoplastic lesions were observed in the kidney. The only neoplastic lesion observed for male rats was an increase in interstitial cell adenomas of the testis which was considered to represent marked hyperplasia and was not believed to represent autonomous growth. No increased frequencies of neoplastic lesions were noted for female rats from any isopropanol exposure groups. The NOEL for toxic effects was 500 ppm.	59 FR 38472; 7/28/94, Docket OPPTS-44612
Isopropanol	67-63-0	HEGTOXCHRM Mammalian BM micronucleus assay	40 CFR 798.5395 (modified)	mice	intraperitoneal injection	0, 350, 1173, 2500 mg/kg	15/sex/group	The test substance did not induce a significant increase in micronuclei in polychromatic erythrocytes at any treatment level under the conditions of this study. Therefore, the test substance is considered negative in the mouse bone marrow micronucleus assay.	56 FR 12202; 3/22/91 OTS0529356
Isopropanol	67-63-0	HEGTOXMUTA Gene mutations in somatic cells	40 CFR 798.5300	Chinese hamster ovary cells (CHO)	*in vitro*	0 (control), and 10 concentrations ranging from 0.0098 to 5.0 mg/mL	Not applicable	Preliminary cytotoxicity tests indicated that isopropanol was nontoxic to CHO cells at up to 5.0 mg/mL. No evidence of increased mutant frequencies over controls was noted, with or without activation.	55 FR 25366; 6/21/90 OTS0525977
Isopropanol	67-63-0	HENEUR Developmental neurotoxicity screen	40 CFR 795.250	rats	oral (gavage), gestation day 6 through postnatal day 21	0, 200, 700, 1200 mg/kg/d	35 females	Maternal toxicity (death of 1/35) occurred at 1200 mg/kg/day. No evidence of developmental neurotoxicity was observed at any dose tested. The NOAEL for maternal toxicity was 700 mg/kg/day and for developmental neurotoxicity was 1200 mg/kg/day.	OTS0532882
Isopropanol	67-63-0	HENEUR Functional observational battery	40 CFR 798.6050 (modified)	rats	inhalation, 6 hr	0, 500, 1500, 5000, 10,000 ppm	25/sex/group	Statistically significant FOB changes were observed for most of the parameters evaluated at 1- and 6- hour periods for animals in the 10,000 ppm group. Exposure-related changes in some FOB parameters were observed in animals in the 5000 ppm group 1 hour after exposure. Based on the results of the study, exposure of male and female rats to 5000 and 10,000 ppm produced transient, concentration-related narcosis and/or central nervous system sedation.	OTS0529356

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Isopropanol	67-63-0	HENEUR Functional observational battery	40 CFR 798.6050 (modified)	mice	inhalation, 6 hr/d, 5 d/wk, 14 weeks	0, 100, 500, 1500, 5000 ppm	10/sex/group	Neurobehavioral evaluations indicated no changes in the functional observational battery.	OTS0529356
Isopropanol	67-63-0	HENEUR Functional observational battery	40 CFR 798.6050 (modified)	rats	inhalation, 6 hr/d, 5 d/wk, 14 weeks	0, 100, 500, 1500, 5000 ppm	25/sex/group, except 10/sex at 100 ppm	Neurobehavioral evaluations indicated no changes in the functional observational battery.	OTS0529356
Isopropanol	67-63-0	HENEUR Motor activity	40 CFR 798.6200 (modified)	rats	inhalation, 6 hr/d, 5 d/wk, 14 weeks	0, 100, 500, 1500, 5000 ppm	25/sex/group, except 10/sex at 100 ppm	Increased motor activity for female rats in the 5000 ppm group was noted at weeks 9 and 13.	OTS0529356
Isopropanol	67-63-0	HENEUR Motor activity	40 CFR 798.6200 (modified)	rats	inhalation, 6 hr	0, 500, 1500, 5000, 10,000 ppm	25/sex/group	Concentration-related decreases in mean motor activity were observed for males in the 1500, 5000, and 10,000 ppm and females in the 5000 and 10,000 ppm groups. Based on the results of the study, exposure of male and female rats to 5000 and 10,000 ppm produced transient, concentration-related narcosis and/or central nervous system sedation	OTS0529356
Isopropanol	67-63-0	HENEUR Neuropathology	40 CFR 798.6400 (modified)	rats	inhalation, 6 hr/d, 5 d/wk, 14 wks	0, 100, 500, 1500, 5000 ppm	25/sex/group, except 10/sex at 100 ppm	Neuropathologic examination revealed no exposure-related lesions in the central or peripheral nervous system.	OTS0529356
Isopropanol	67-63-0	HERTOXTERA Developmental toxicity	40 CFR 798.4900	rats	oral (gavage), gestation day 6-15	0, 400, 800, 1200 mg/kg/d	25 females	Maternal toxicity was observed at 800 and 1200 mg/kg/day (mortality: 1 at mid-dose; and 2 at high-dose); reduced maternal weight gain at 1200 mg/kg/day (possibly due to reduced gravid uterine weight). Fetotoxicity (reduced fetal body weight and litter weight) occurred at 800 and 1200 mg/kg/day.	55 FR 53348; 12/28/90 OTS0529355
Isopropanol	67-63-0	HERTOXTERA Developmental toxicity	40 CFR 798.4900	rabbits	oral (gavage), gestation day 6-18	0, 120, 240, 480 mg/kg/d	15 females	Maternal toxicity was observed at 480 mg/kg/day (decreased body weight and food consumption, rupture of peripheral capillaries in the ear of 1 doe, cyanosis and lethargy in another). No evidence of embryotoxicity, fetotoxicity, or teratogenicity was seen at any level.	55 FR 53348; 12/28/90 OTS0529355

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Isopropanol	67-63-0	HERTOXTERE Reproductive/fertility effects	40 CFR 798.4700	rats	oral (gavage), continuous for 2 generations	0, 100, 500, 1000 mg/kg/d	30/sex	Summary information indicated that increased maternal weight gain was observed in the mid- and high-dose groups, but not the low-dose group. A significant increase in post-weaning pup mortality in high-dose animals was noted (generation not specified). The NOAEL for maternal effects was 100 mg/kg/day and for reproductive toxicity ≥ 1000 mg/kg/day. No other information was provided in this report.	57 FR 23227; 6/02/92 OTS0532880
Isopropanol	67-63-0	HESTOX Subchronic inhalation toxicity	40 CFR 798.2450	rats and mice	inhalation, 6 hr/d, 5 d/wk, 13 weeks	0, 500, 1500, 5000 ppm	25 rats/sex or 10 mice/sex	This summary report indicated that no significant histopathologic effects were noted on reproductive organs. No other information was provided.	56 FR 2202; 3/22/91 OTS0532880